



DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
2000 NAVY PENTAGON
WASHINGTON, D.C. 20350-2000

Canc frp: Mar 02

IN REPLY REFER TO
OPNAVNOTE 4700
Ser N431H/1U593126
14 May 01

OPNAV NOTICE 4700

From: Chief of Naval Operations

Subj: NOTIONAL INTERVALS, DURATIONS, MAINTENANCE CYCLES, AND REPAIR
MAN-DAYS FOR DEPOT LEVEL MAINTENANCE AVAILABILITIES OF U.S.
NAVY SHIPS

Ref: (a) OPNAVINST 4700.7J
(b) OPNAVINST 3120.33B
(c) OPNAVINST 4780.6C

Encl: (1) Notional Intervals, Durations, Maintenance Cycles and Repair Man-days for Depot
Level Maintenance Availabilities
(2) List of Maintenance Terms and Definitions

1. Purpose

a. To issue depot level availability notional intervals, durations, maintenance cycles, and repair man-days for all ships of the U.S. Navy, except those ships assigned to the Military Sealift Command and the Naval Special Warfare Command.

b. To provide a detailed description of availability types and current maintenance terms.

2. Cancellation. OPNAVNOTE 4700 Ser N431H/0U593106 of 1 March 00.

3. Background. Reference (a), Maintenance Policy for Naval Ships, establishes the policies and responsibilities for planning, programming, budgeting, scheduling, performing, and evaluating maintenance of ships. References (b), Submarine Extended Operating Cycle (SEOC) Program, and (c), Procedures for Administering Service Craft and Boats in the U.S. Navy, issue the depot level maintenance requirements for nuclear ship and non-nuclear service craft, respectively. This notice does the following:

a. Establishes notional intervals, durations, and repair man-days for depot level maintenance availabilities of U.S. Navy ships. Maintenance cycles are derived from the combination of notional intervals and durations. This notice constitutes a major revision from the previous version and should be reviewed in its entirety.

b. Changes in this notice include:

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(1) Changes in durations, intervals, maintenance cycle and notional man-days for following ship classes:

AGF (includes FDNF)
AOE 1
AOE 6
ARS 50 (includes FDNF)
CG 47 (includes FDNF)
CVs/CVNs (includes FDNF)
DD 963 (includes FDNF)
DDG 51 (includes FDNF)
FFG 7 (includes FDNF)
LCC 19 (includes FDNF)
LHA 1
LHD 1 (includes FDNF)
LPD 4 (includes FDNF)
LSD 36
LSD 41 (includes FDNF)
LSD 49 (includes FDNF)
LST 1179
MCM 1 (includes FDNF)
MHC 51 (includes FDNF)
SSN 688

(2) Changed notional durations, intervals, and notional man-day figures for all vessels except AGF, LCC, CV, CVN, and SSN, SSBN were derived using the Maintenance Requirements System (MRS).

(3) Due to Government Owned Contractor Operated (GOCO) arrangements for ex-SUSTAIN, docking availabilities conducted in Mayport are split into two phases, docking portion and topside/non-docking portion. This results in an additional eight percent increase in time spent in availabilities. Average number of month's extension for each ship class follows:

- CG – 2 months
- DD – 1.5 MONTHS
- DDG – 1.5 MONTHS
- FFG – 1 MONTH

4. Policy. Chief of Naval Operations (CNO) requirements for the accomplishment of ship, submarine, and service craft maintenance are contained in references (a) through (c).

a. Maintenance cycle is defined as the period of time which starts after the completion of a ship's overhaul (or docking availability, when no overhaul availabilities are included in the

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maintenance plan) and ends after completion of the next overhaul or docking availability. For new construction or conversion ships, the maintenance cycle starts after completion of the post shakedown availability or as defined in the ship's class maintenance plan.

b. Interval is defined as the period from the completion of one scheduled depot availability to the start of the next scheduled depot availability.

c. Duration is defined as the period from the start of an availability to its completion.

d. Continuous Maintenance (CM) is defined as depot level maintenance conducted annually on specified vessels outside of scheduled CNO availabilities. The Continuous Maintenance component for surface ships includes average ship class deferred maintenance spread over a 4-year period. Only those surface ships in the Maintenance Requirements System (MRS) have CM.

e. Repair man-days are those type commander maintenance man-days typically accomplished by the executing activity to satisfactorily complete the type of availability indicated. Repair man-days include Title D and F alteration man-days normally accomplished during the availability. Repair man-days do not include man-days from concurrent intermediate level maintenance availabilities.

(1) Submarine repair man-days are derived from repair estimates reviewed and analyzed by Submarine Team One.

(2) Surface ship repair man-days are derived from Class Maintenance Plan (CMP) estimated man-days and the MRS.

(3) Aircraft carrier estimated repair man-days are derived from Aircraft Carrier Continuous Maintenance Program (ACCOMP) for ships under the Engineered Operating Cycle (EOC) or Incremental Maintenance Program (IMP), as applicable.

(4) Scheduled duration of specific depot availabilities may be adjusted to accommodate necessary maintenance, modernization, and depot loading. The durations specified in enclosure (1) provide the best notional estimates for long range planning in the absence of any specific information.

(5) The man-days specified in enclosure (1) represent the "typical" man-days required by the executing activity and provide the best basis for programming and budgeting purposes in the absence of specific information related to a specific availability. They are neither the minimum nor the "cap" for ship type availabilities. Man-day estimates which exceed or reduce the notional man-days for specific ship availabilities will be incorporated into the Fleet Modernization Program Management Information System (FMPMIS) database when technical justification is provided to CNO and Commander, Naval Sea Systems Command (COMNAVSEASYS COM).

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Changes to the man-days may be required based on actual ship material condition, actual shipyard estimates or for additional services and light-off assessment preparations associated with extended duration availabilities. For extended duration availabilities, plan an additional eight percent of notional man-days for each month extension to allow for additional services.

(6) To ensure compatibility with ship's employment schedule and to facilitate depot work loading, deviation from the notional depot availability interval, as specified in enclosure (1), is authorized as follows:

(a) Allowable deviations for submarine depot availabilities are specified in reference (b).

(b) Allowable deviations for surface ship and carrier depot availabilities are:

<u>Period from start of maintenance cycle to start of Notional Availability</u>	<u>Allowable Deviation</u>
0-36 mo	+ / - 3 mo
37-48 mo	+ / - 4 mo
49-60 mo	+ / - 5 mo
61-72 mo	+ / - 6 mo
Greater than 72 months	+ / - 7 mo

f. In accordance with reference (a), all depot availability schedule changes must be coordinated among cognizant Fleet Commanders in Chief (FLTCINCs), COMNAVSEASYSCOM (SEA-04X and SEA-08 for nuclear-powered ships or ships with nuclear support facilities) and CNO (N42, N43, N75, N765, N771, N785).

g. Revisions to notional intervals, durations, maintenance cycles, and man-days shall follow the following process:

(1) CNO (N43) issues guidance announcing OPNAVNOTE 4700 revision cycle schedule.

(2) Any activity submits recommended revisions to the COMNAVSEASYSCOM (SEA-04M and SEA-08 for nuclear-powered ships or ships with nuclear support facilities) with an information copy to the Fleets and CNO (Resource Sponsor and N431).

(3) COMNAVSEASYSCOM (SEA-04M and SEA-08 for nuclear-powered ships or ships with nuclear support facilities) serves as the NAVSEASYSCOM point of contact for all platform Class Maintenance Plans; coordinates review of data supporting recommended revisions; and endorses recommendations with rationale for approval or disapproval.

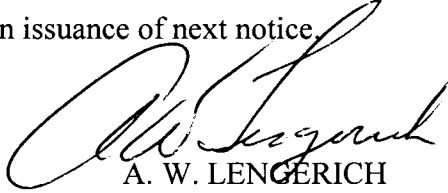
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(4) Resource sponsor reviews and requests CNO (N43) modify OPNAVNOTE 4700 as required.

(5) CNO (N43) prepares, obtains resource sponsor, FLTCINC, and NAVSEA concurrence; then issues revised OPNAVNOTE 4700.

5. Action. FLTCINC's, COMNAVSEASYSKOM, and CNO sponsors are to implement the above guidance following the detailed policy provided in references (a) through (c).

6. Cancellation Contingency. Upon issuance of next notice.



A. W. Lengerich
By direction

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OPNAVNOTE 4700
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NOTIONAL INTERVALS, DURATIONS, MAINTENANCE CYCLES, AND REPAIR MAN-DAYS FOR DEPOT LEVEL
MAINTENANCE AVAILABILITIES

SHIP CLASS	MAINT STRATEGY	TYPE AVAIL	NOTIONAL DURATION (MOS)	NOTIONAL INTERVAL (MOS)	MAINT CYCLE (MOS)	NOTIONAL MAN-DAYS (000)	TIME LINE NUMBERS INDICATE MONTHS					
							SCO	-----	SCO	-----	ISRA	-----
AFDL 6	ROH	SCO	3	60	63	15.0	0	60	63			
AFDM CL	ROH	SCO	6	60	66	40.0	0	60	66			
AFDM 7	PM	DCM	12		12	7.5	0	DCM				
AGF 3 (FDNF) NOTE 1	PROG	DSRA ISRA SRA	5	60	62	62.9	0	-----	ISRA	-----	ISRA	-----
			3	12		19.7	0	12	15	27	30	42
						36.0	57	DSRA				
AGF 11	PM	DPMA PMA	5	51	56	35.1	0	-----	PMA	-----	PMA	-----
			3	15		19.5	0	15	18	33	36	51
AGSS 555	PM	DPMA1 DPMA2	6	42	72	UNIQUE	0	-----	DPMA2	-----	DPMA1	-----
			8	42			0	18	26	42	48	66
AOE 1 CL LANT	PM	DPMA PMA CM	4	66	70	123.8	0	-----	PMA	-----	PMA	-----
			3	20		45.0	0	20	23	43	46	66
AOE 1 CL PAC	PM	DPMA PMA CM	4	66	70	46.2	0	-----	PMA	-----	PMA	-----
			3	20		25.6	0	20	23	43	46	66
AOE 6 CL	PM	DPMA PMA CM	4	66	70	28.5	0	-----	PMA	-----	PMA	-----
			3	20		17.2	0	20	23	43	46	66

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							SCO 0	---- 60	SCO 66	---- 33.5	PMA 36	---- 51	DPMA 55	
ARDM CL	ROH	SCO	6	60	66	40.0	SCO 0	---- 60	SCO 66	---- 33.5	PMA 36	---- 51	DPMA 55	
ARS 50 CL	PM	DPMA PMA CM	4 2.5	51 15	55	7.8 3.6 1.9	DPMA 0	---- 15	PMA 17.5	---- 33.5	PMA 36	---- 51	DPMA 55	
ARS 50 CL (FDNF)	PM	DSRA SRA CM	4 2.5	51 15	55	7.8 3.6 1.9	DSRA 0	---- 15	SRA 17.5	---- 33.5	SRA 36	---- 51	DSRA 55	
AS 39	PM	DPMA PMA	4 3	96 30	100	38.4 18.0	DPMA 0	---- 30	PMA 33	---- 63	PMA 66	---- 96	DPMA 100	
CG 47 CL	PROG	EDSRA DSRA SRA CM	8 4 2.5	140 68 21	148	32.0 14.7 9.1 6.6	EDSRA 0	---- 21	SRA 23.5	---- 44.5	SRA 47	---- 68	DSRA 72	
														---- 93
CG-47 CL FDNF	PROG	DSRA SRA CM	5 3	48 14	53	36.9 17.3 0.9	DSRA 0	---- 14	SRA 17	---- 31	SRA 34	---- 48	DSRA 53	

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CV 63 (FDNF) NOTE 2	PROG	IDSRA	5	57	61	129.3	0	-----	8	12	-----	20	24	-----	32
		ISRA	4	8		71.0	-----	ISRA	48	-----	56	IDSRA	61	-----	36
CV 64 & 67 CL	EOC	COH	12	60	72	401.3	COH	-----	-----	SRA	21	-----	SRA	-----	COH
		SRA	3	18		49.7	0	-----	18	-----	-----	39	42	-----	72
		DSRA	4			60.4									
CVN 65 NOTE 3	EOC	ESRA1	6	18	76.5	190.2	PSA	-----	-----	ESRA1	24	-----	EDSRA1	-----	
		ESRA2	6	18		226.3	0	-----	18	-----	-----	42	52.5	-----	
		ESRA3	6	18		261.3									
		EDSRA1	10.5	66		401.2	-----	ESRA2	76.5	-----	94.5	ESRA2	100.5	-----	EDSRA2
		EDSRA2	10.5	66		401.2	70.5	-----	-----	-----	-----	171	118.5	-----	129
		EDSRA3	10.5	67		462.8	-----	ESRA3	153	-----	-----	177	195	-----	EDSRA3
CVN 68 CL NOTE 4	IMP	RCOH	33			3200.0	PSA	-----	-----	PIA1	24	-----	PIA1	-----	PIA1
		DPIA1	10.5	66	76.5	255.8	0	-----	18	-----	24	42	48	-----	76.5
		DPIA2	10.5	66		308.9									
		DPIA3	10.5	66		356.6	-----	PIA2	100.5	-----	118.5	PIA2	142.5	-----	DPIA2
		PIA1	6	18		146.2	94.5	-----	-----	-----	-----	124.5	153	-----	171
		PIA2	6	18		173.8									
		PIA3	6	18		201.4	PIA3	-----	-----	PIA3	201	-----	DPIA3	-----	PIA3
		PSA/SRA	4			71.0	-----	PIA3	277.5	-----	295.5	RCOH	-----	PSA/SRA	253.5
							271.5	-----				0	4	-----	26

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							DSRA	----	SRA	----	DSRA	DSRA	DSRA
DD 963 CL	PROG	DSRA SRA CM	3.5 2.5	68 21	71.5	17.7 10.2 1.8	0	21	23.5	44.5	47	68	71.5
DD 963 CL (FDNF)	PROG	DSRA SRA CM	4 2	49 15	53	18.1 10.6 2.2	0	15	17	32	34	49	53
DDG 51 CL	PROG	DSRA SRA CM	3.5 2.5	68 21	71.5	13.1 7.7 1.9	0	21	23.5	44.5	47	68	71.5
DDG 51 CL (FNDP)	PROG	DSRA SRA CM	5 3	48 26	53	17.8 12.2 2.1	0	14	17	31	34	48	53
FFG 7 CL	PROG	DSRA SRA CM	3 2	67 21	70	15.7 6.6 2.3	0	21	23	44	46	67	70
FFG 7 CL (FDNF)	PROG	DSRA SRA CM	3 2	49 15	52	13.4 9.1 2.2	0	15	17	32	34	49	52

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SHIP CLASS	MAINT STRATEGY	TYPE AVAIL	NOTIONAL DURATION (MOS)	NOTIONAL INTERVAL (MOS)	MAINT CYCLE (MOS)	NOTIONAL MAN-DAYS (000)	TIME LINE NUMBERS INDICATE MONTHS							
LCC 19 (FDNF)	PROG	DSRA	3	58	61	31.9	DSRA 0	---- 4	SRA 6	---- 10	SRA 12	---- 16	SRA 18	
		SRA	2	4				22	SRA 24	---- 28	SRA 30	---- 34	SRA 36	---- 40
								SRA 42	---- 46	SRA 48	---- 52	SRA 54	---- 58	DSRA 61
LCC 20	PM	DPMA	4	51	55	31.3	DPMA 0	---- 15	PMA 18	---- 33	PMA 36	---- 51	DPMA 55	
		PMA	3	15										
LHA 1 CL NOTE 5	EOC	COH	11	56	67	154.4	COH 0	---- 16	SRA 20	---- 36	SRA 40	---- 56	COH 67	
		SRA	4	16										
		CM												
	PM	DPMA	6	88	94	140.4	DPMA 0	---- 19	PMA 23	---- 42	PMA 46	---- 65	PMA 69	
		PMA	4	19										
		CM												
LHA 1 CL (FDNF)	PROG	DSRA	5	51	56	78.3	DSRA 0	---- 15	SRA 18	---- 33	SRA 36	---- 51	DSRA 56	
		SRA	3	15										
		CM												

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LHD 1 CL	PM	DPMA PMA CM	8 4	65 19	73	135.0 30.2 4.6	0	19	23	42	46	65	DPMA 73
LHD 1 CL (FDNF)	PROG	DSRA SRA PM	5 3	51 15	56	77.2 39.8 5.4	DSRA 0	15	18	33	36	51	DSRA 56
LPD 4 CL	PM	DPMA PMA CM	4 3	66 20	70	35.2 26.3 5.7	DPMA 0	20	23	43	46	66	DPMA 70
LPD 4 CL (FDNF)	PROG	DSRA SRA CM	4 3	51 15	55	30.7 23.9 5.7	DSRA 0	15	18	33	36	51	DSRA 55
LSD 36 CL	PM	DPMA PMA CM	4 3	66 20	70	23.9 17.7 4.7	DPMA 0	20	23	43	46	66	DPMA 70
LSD 41 CL	PM	DPMA PMA CM	4 3	66 20	70	26.1 21.4 2.2	DPMA 0	20	23	43	46	66	DPMA 70
LSD 41 CL (FDNF)	PROG	DSRA SRA CM	4 3	51 15	55	20.8 17.9 2.6	DSRA 0	15	18	33	36	51	DSRA 55

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							DPMA	-----	PMA	-----	PMA	-----	DPMA
LSD 49 CL	PM	DPMA PMA CM	4 3	66 20	70	26.1 21.4 2.2	0	20	23	43	46	66	70
LSD 49 CL (FNDF)	PROG	DSRA SRA CM	4 3	51 15	55	20.8 17.9 2.6	0	15	18	33	36	51	55
LST 1179 CL	PM	DPMA PMA CM	4 3	14 15	54	19.5 17.6 2.1	0	14	17	32	35	50	54
MCM 1 CL	PM	DPMA PMA CM	3 3	69 21	72	8.1 4.2 0.2	0	21	24	45	48	69	72
MCM 1 CL (FNDF) NOTE 1	PROG	DSRA ISRA CM	3 3	69 12	72	8.1 2.6 0.2	0	12	15	27	30	42	45
MCS 12 CL	PM	DPMA PMA CM	5 3	69 21	74	28 16.5	0	21	24	45	48	69	72
MHC 51 CL	PM	DPMA PMA CM	3 2	70 22	73	5.2 2.0 0.2	0	22	24	46	48	70	73
MHC 51 CL (FNDF)	PM	DSRA ISRA CM	3 2	70 12	73	7.2 2.6 0.2	0	12	14	28	30	42	44
							56	58	70	73			

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NR-1	PROG	DSRA1	2	22.5	220	12.0	ROH	----	DSRA	----	DSRA1	----	DSRA1
		DSRA2	3	22.5		20.0	0	22.5	24.5	47	49	71.5	73.5
							----	DSRA1	----	DSRA2	----	DSRA1	----
SSBN 726 CL NOTES 6,8,10	EOC						96	99	121.5	123.5	146	148	170.5
							DSRA1	----	DSRA1	----	DSRA1	----	INACT
							172.5	195	197	219.5	221.5	240	
SSN 21 CL NOTES 7,8,10	EOC	ERP	4	168		33.0	DEL	----	ERP	----	ERO		
		ERO	24	252	276	310.0	0	168	172	240	264		
		INAC/IRR	NOTE 7			NOTE 7	PSA	----	DSRA	----	DSRA	----	DMP
		DMP	13	120	132	123.0	0	38	40	78	80	120	0
		EOH	16	120	136	200.0	----	DSRA	----	DSRA	----	EOH	----
		DSRA	2	38		20.0	38	40	78	80	120	0	38
							DSRA2	----	DSRA2	----	INACT		
							40	78	80	120			

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SHIP CLASS	MAINT STRATEGY	TYPE AVAIL	NOTIONAL DURATION (MOS)	NOTIONAL INTERVAL (MOS)	MAINT CYCLE (MOS)	NOTIONAL MAN-DAYS (000)	TIME LINE NUMBERS INDICATE MONTHS					
SSN 688 CL (688-718) NOTES 6,8-11	EOC	INAC/IRR	NOTE 7	120	144	NOTE 7 303.0 20.0 NOTE 12	DMP	DSRA2	DSRA2	DSRA2	DSRA2	DSRA2
		ERO	24	120			0	38	78	80	80	80
		DSRA 2	2	38			-----	ERO	DSRA2	DSRA2	DSRA2	DSRA2
SSN 688 CL (719-773) NOTES 8-11	EOC	PIRA	NOTE 12		136 133	NOTE 7 200.0 138.0 20.0 20.0 NOTE 12	120	0	40	78	80	120
							INACT	-----	DSRA2	DSRA2	DSRA2	DSRA2
		INAC/IRR	NOTE 7	120			PSA	DSRA1	DSRA1	DSRA1	DSRA1	DSRA1
		EOH	16	120			0	38	78	80	120	120
		DMP	13	120			-----	DSRA2	DSRA2	DSRA2	DSRA2	DSRA2
		DSRA 1	2	38			38	40	80	120	120	120
		DSRA 2	2	38			DSRA2	DSRA2	DSRA2	DSRA2	DSRA2	DSRA2
		PIRA	NOTE 12				DSRA2	DSRA2	DSRA2	DSRA2	DSRA2	DSRA2
							40	78	80	120	120	120
							DSRA2	DSRA2	DSRA2	DSRA2	DSRA2	DSRA2
							40	78	80	120	120	120
							DSRA2	DSRA2	DSRA2	DSRA2	DSRA2	DSRA2
							40	78	80	120	120	120
							DSRA2	DSRA2	DSRA2	DSRA2	DSRA2	DSRA2
							DSRA2	DSRA2	DSRA2	DSRA2	DSRA2	DSRA2
							40	78	80	120	120	120
							DSRA2	DSRA2	DSRA2	DSRA2	DSRA2	DSRA2
							40	78	80	120	120	120
							DSRA2	DSRA2	DSRA2	DSRA2	DSRA2	DSRA2
							DSRA2	DSRA2	DSRA2	DSRA2	DSRA2	DSRA2
							40	78	80	120	120	120
							DSRA2	DSRA2	DSRA2	DSRA2	DSRA2	DSRA2
							40	78	80	120	120	120
							DSRA2	DSRA2	DSRA2	DSRA2	DSRA2	DSRA2
							DSRA2	DSRA2	DSRA2	DSRA2	DSRA2	DSRA2
							40	78	80	120	120	120
							DSRA2	DSRA2	DSRA2	DSRA2	DSRA2	DSRA2
							40	78	80	120	120	120
							DSRA2	DSRA2	DSRA2	DSRA2	DSRA2	DSRA2
							DSRA2	DSRA2	DSRA2	DSRA2	DSRA2	DSRA2
							40	78	80	120	120	120
							DSRA2	DSRA2	DSRA2	DSRA2	DSRA2	DSRA2
							40	78	80	120	120	120
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FLEET CODES

FDNF FORWARD DEPLOYED
NAVAL FORCES

AVAILABILITY TYPES

CM	CONTINUOUS MAIN- TENANCE
COH	COMPLEX OVERHAUL
DCM	DRYDOCK CONTINUOUS MAINTENANCE
DEL	DELIVERY DATE
DMP	DEPOT MODERNIZATION PERIOD
DPIA	DOCKING PHASED INCREMENTAL AVAILABILITY
DPMA	DRYDOCKING PHASED MAINTENANCE
DSRA	DRYDOCKING SELECTED RESTRICTED AVAILABILITY
EDSRA	EXTENDED DRYDOCKING SELECTED RESTRICTED AVAILABILITY
EOH	ENGINEERED OVERHAUL
ERO	ENGINEERED REFUELING OVERHAUL
ERP	EXTENDED REFIT PERIOD
INAC	INACTIVATION AVAILABILITY
IRR	COMBINED INACTIVATION, REACTOR COMPARTMENT DISPOSAL AND HULL RECYCLING AVAILABILITY
IDSRA	INCREMENTAL DOCKING SRA

AVAILABILITY TYPES, CONT'D

ISRA	INCREMENTAL SELECTED RESTRICTED AVAILABILITY
PIA	PHASED INCREMENTAL AVAILABILITY
PIRA	PRE-INACTIVATION RESTRICTED AVAILABILITY
PIA	PHASED INCREMENTAL AVAILABILITY
PMA	PHASED MAINTENANCE AVAILABILITY
PSA	POST SHAKEDOWN AVAILABILITY
RCOH	REFUELING COMPLEX OVERHAUL
ROH	REGULAR OVERHAUL
SCO	SERVICE CRAFT OVERHAUL
SRA	SELECTED RESTRICTED AVAILABILITY

MAINTENANCE STRATEGIES

IMP	INCREMENTAL MAINTENANCE PROGRAM
PM	PHASED MAINTENANCE
PROG	PROGRESSIVE MAINTENANCE
EOC	ENGINEERED OPERATING CYCLE
ROH	REGULAR OVERHAUL

14 MAY 2001

NOTES:

1. ISRAs will be accomplished incrementally, dependent on the operational requirements of the Fleet commander. Docking periods during ISRAs will be scheduled as required for AGF 3.

2. KITTY HAWK is a one-of-a-kind forward-deployed carrier. The ship will require growing maintenance requirements for ISRAs during the period FY 01 to FY 03. As a result, the required maintenance man-days over this period are as follows:

FY01: 87.2K MDs FY02: 97.5K MDs FY 03 docking ISRA is 129.3 K MDs.

For ISRA availabilities from FY 04 to INACT, KITTY HAWK must remain a fully capable carrier until decommissioning. To achieve this level of readiness, the maintenance requirement will decrease in a similar stepped function, as follows:

FY 04: 90K MDs FY 05: 80K MDs FY 06: 70K MDs FY 07: 60K MDs FY 08: 25K MDs

3. CVN 65 has its own specifically designed Incremental Maintenance Program (IMP). It closely follows the IMP for the CVN 68 Class, but uses different names for the availabilities; e.g., ESRA and EDSRA. These will continue until the end of its service life.

4. NIMITZ Class CVNs have transitioned to Incremental Maintenance Program. The RCOH will normally coincide with the fourth DPIA depending on the operational tempo and the actual duration of earlier depot level availabilities which directly affect the rate of fuel depletion. A material condition assessment is required four years in advance of RCOH to further define man-day requirements.

5. Phased maintenance will begin for each hull in the LHA 1, TARAWA Class, after its next complex overhaul.

6. Nuclear ships may require adjustment in overhaul intervals based on rate of fuel depletion. Man-days to support refueling preparations must be programmed up to 3 years in advance.

7. Notional man-days and duration of INAC/IRR availabilities vary by hull and are entered into the Fleet Modernization Program Management Information System (FMPMIS).

8. Refer to OPNAVINST 3120.33B for SSN and SSBN operating cycles, maintenance strategies and extension requirements.

9. For the last SSN 688 Class DSRA2 executed prior to inactivation, reduce the notional man-days to 17,000 to reflect reducing the scope of work of these availabilities.

10. Add 3,000 man-days for dock services when a DSRA is performed at a shipyard.

11. For the first SSN 688 class ERO performed in a shipyard, add 10,000 man-days to notional ERO man-day figure. For the first SSN 688 DMP performed in a shipyard, add 5,000 man-days to notional DMP man-day figure.
12. A PIRA is a hull specific availability used to establish a final, abbreviated OPCYCLE prior to inactivation if required.

List of Maintenance Terms and Definitions

Depot Modernization Period (DMP). An availability scheduled primarily for the installation of major high priority warfare improvement alterations.

Docking Phased Maintenance Availability (DPMA). A PMA expanded in scope to include maintenance and modernization that require dry-docking.

Docking Planned Incremental Availability (DPIA). A labor-intensive availability, of less than a year duration, for aircraft carriers in an Incremental Maintenance Program. Maintenance and modernization are accomplished. Aircraft carriers assigned to Incremental Maintenance Programs are maintained through PIAs and DPIAs in lieu of overhauls.

Docking Selected Restricted Availabilities (DSRA). An SRA expanded in scope to include maintenance and modernization that require dry-docking.

Drydock Continuous Maintenance (DCM). A nearly continuous availability period performed on drydocks which carry out industrial maintenance and selected modernization maintenance when the drydock is not in use.

Engineering Operating Cycle (EOC). This maintenance philosophy keeps ships in an acceptable material condition while sustaining or increasing the operational availability of the ship. Earmarked by a structured engineered approach for ship maintenance while minimizing the time spent in depot-level availabilities. Major elements of the maintenance strategy include:

- a. Periodic inspections of selected systems and equipment to identify and document necessary repair requirements and material condition trends.
- b. Periodic maintenance tasks to be accomplished at specified times during the ship's life cycle.
- c. Scheduled intra-cycle Intermediate Maintenance Availabilities (IMAVs), Drydocking SRAs (DSRAs), SRAs, and ROHs to accomplish the maintenance and modernizations required to sustain or improve the material condition of the ship.
- d. Extensive modernization to maintain and upgrade the ship class war fighting capability.

Engineered Periodicities. The recommended periodicity for accomplishment of a maintenance action and is based upon an engineering analysis of all relevant technical maintenance history information including material condition and performance feedback data.

Extended Docking Selected Restricted Availability (EDSRA). A DSRA expanded in scope to include maintenance and modernization that cannot be accomplished in a DSRA.

Extended Refit Period (ERP). A labor-intensive period, typically lasting four months during which SSBNs accomplish maintenance and modernization which cannot be completed during a normal refit period.

Inactivation Availability (INAC). An availability assigned to prepare a ship for inactivation or disposal. The scope of work depends on the planned disposition of the ship.

Incremental Maintenance Program (IMP). A maintenance philosophy which keeps aircraft carriers in an acceptable material condition through a series of incremental depot maintenance actions. Types of availabilities under this maintenance philosophy include PIAs and DPIAs.

Incremental Selected Restricted Availability (ISRA). An availability for continuous accomplishment of industrial maintenance and selected modernization. A nearly continuous availability period assigned to forward deployed aircraft carriers and mine warfare ships.

Maintenance Requirements System (MRS). Historic average of completed CNO availabilities, deferred maintenance & continuous maintenance. Provides basis to accurately project depot maintenance budgets for POM cycle and to assess risks of deferring maintenance.

Overhaul. A major availability normally exceeding 6-months' duration for the accomplishment of maintenance and modernization. Program Managers frequently use terms such as:

- a. Regular, Complex, or Engineered Overhaul availability (ROH, COH, or EOH) to describe or identify planning and execution differences among overhaul availabilities of different ship classes.

- b. Refueling complex or engineered refueling overhaul availability (RFOH, RCOH or ERO) to describe or identify fundamental planning and execution differences among overhaul availabilities of different nuclear powered ship classes during which the reactor is also refueled.

Pre-Inactivation Restricted Availability (PIRA). A hull specific availability assigned to establish a final, abbreviated OPCYCLE prior to inactivation.

Phased Maintenance (PM). This maintenance philosophy uses depot level maintenance through a series of short, frequent Phased Maintenance Availabilities (PMAs) in lieu of Regular Overhauls (ROHs). The goals of Phased Maintenance are to maximum ship availability, improve operational readiness, and upgrade material condition. Major elements of this maintenance strategy include:

- a. Availabilities are executed in the ship's homeport. Ships are scheduled for PMAs of 2 to 4 months at intervals of 15 to 18 months which include both repairs and modernization.

- b. Adhere to Condition Based Repair in which repair and replacement is determined by the actual material condition of systems and equipment. Only those repairs necessary to sustain proper functioning of equipment are identified and authorized for accomplishment.
- c. Port Engineers are involved in the planning, budgeting, authorizing, and execution of all maintenance actions and remain with the same ships through their cycle.
- d. Repair decision approval authority is preserved in the ship's COs, Port Engineers, and Supervisors of Shipbuilding, Conversion and Repair (SUPSHIP).
- e. Use of multi-ship/multi-year contracts to ensure production contractor participation in the advance planning process as it is difficult to fully define all work in the condition based maintenance environment.

Phased Maintenance Availability (PMA). A short labor- intensive availability for ships in a Phased Maintenance Program for the accomplishment of maintenance and modernization. Ships assigned to Phased Maintenance Programs are maintained through PMAs in lieu of overhauls.

Planned Incremental Availability (PIA). A labor-intensive availability, of less than 6 months duration, for aircraft carriers in a Incremental Maintenance Program. Maintenance and modernization are accomplished. Aircraft carriers assigned to Incremental Maintenance Programs are maintained through PIAs and DPIAs in lieu of overhauls.

Post Shakedown Availability (PSA). An availability assigned to newly built activated or converted ships upon completion of post-delivery shakedown. PSAs will be scheduled so that they are completed no later than the end of the Shipbuilding and Conversion Navy (SCN) obligation work limiting date which is the date on which SCN funding and work authority terminates. Work performed shall normally include correction of defects noted during shakedown correction of deficiencies remaining from the acceptance trials and performance of class modifications remaining from the new construction activation or conversion period.

Progressive Maintenance (PROG). This maintenance philosophy is designed to support ships with reduced manning, limited organizational level maintenance, and operational tempos that limit availability periods. It is also designed to sustain a high level of readiness and increase the ship's availability for required operations. Ships with reduced manning are designed for major component removal and replacement. To compensate for the reduced manning and other shipboard maintenance off-ship component refurbishment is done by intermediate and depot level activities. This concept requires maintenance and logistic support systems significantly different from those required for conventionally manned surface ships. Major elements of the maintenance strategy include:

- a. Engineered maintenance planning.

- b. Progressive overhaul.
- c. Upgrading of maintenance tasks from ship's force to the Intermediate Maintenance Activity (IMA).
- d. Modular replacement.
- e. Dedicated material support and increased stock-level procurement.

Selected Restricted Availability (SRA). A short labor-intensive industrial period assigned to ships in Progressive or Engineered Operating Cycle Maintenance Programs for the accomplishment of maintenance and selected modernization. Ships assigned to Progressive Maintenance Programs are maintained through SRAs in lieu of overhauls.

Service Craft Overhaul (SCO). A major industrial availability for the accomplishment of maintenance and modernization on service craft.